Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously Presented) An apparatus for chemical mechanical polishing of a wafer, comprising:

(a) a platen supporting a polishing surface;

(b) a chuck to hold the wafer against the polishing surface;

(c) a motor coupled to at least one of the polishing surface and the chuck to generate relative motion therebetween; and

(c) an endpoint detector, comprising

(c1) a light source operable to generate a light beam that is directed through the polishing surface to the wafer and produce, from the light beam that is directed through the polishing surface, a light beam reflected from the wafer, and

(c2) a receiver operable to receive the light beam reflected from the wafer, wherein the endpoint detector is operable to determine, based on the light beam reflected from the wafer, when an end point is reached.

2. (Previously Presented) The apparatus of claim 1, wherein the light source is a laser source and the light beam is a laser beam.

3. (Previously Presented) A chemical mechanical polisher, comprising:

a polishing surface that is movable relative to a substrate;

at least one light source operable to transmit light through the polishing surface to a film on the substrate and produce, from the light that is transmitted through the polishing surface,

light reflected from the film on the substrate; and

at least one device operable to detect a change in the light reflected from the film on the substrate and determine, based on the detected change, when an end point is reached.

4. (Previously Presented) The chemical mechanical polisher of claim 3, wherein the at least one device comprises a detector to detect interferometric change in the light reflected from the film and an analyzer to control the chemical mechanical polisher in response to the detected interferometric change.

5. (Previously Presented) The chemical mechanical polisher of claim 4, wherein the analyzer is operable to analyze interferometric change in the light reflected from the film to determine a change in dimension of the film.

6. (Previously Presented) The chemical mechanical polisher of claim 5, wherein the analyzer is operable to analyze interferometric change in the light reflected from the film using interferometry at one wavelength.

7. (Previously Presented) The chemical mechanical polisher of claim 5, wherein the analyzer is operable to analyze interferometric change in the light reflected from the film using spectrophotometry over a continuous range of wavelengths.

8. (Previously Presented) The chemical mechanical polisher of claim 5, wherein the analyzer is operable to analyze interferometric change in the light reflected from the film to determine a change in thickness or planarity of the film.

9. (Previously Presented) The chemical mechanical polisher of claim 3, wherein the light transmitted through the polishing surface and the light reflected from the film are transmitted through a rotating fiber optic cable embedded in a rotating platen below the polishing pad.

10. (Previously Presented) The chemical mechanical polisher of claim 3, wherein the at least one light source is operable to transmit light to only a section of the film.

11. (Previously Presented) The chemical mechanical polisher of claim 3, wherein the light source is operable to transmit light to more than one section of the film.

12. (Previously Presented) The chemical mechanical polisher of claim 3, wherein the light source is operable to produce a light of at least one wavelength between 200 and 11,000 nanometers.

13. (Previously Presented) The chemical mechanical polisher of claim 3, wherein the light source is operable to produce laser light.

14-32. (Cancelled)

33. (Previously Presented) A chemical mechanical polisher, comprising:

a polishing material having at least one optical access through which light can be transmitted to a portion of a film on a substrate;

a platen to support the polishing material;

operable to detect interferometric changes in light reflected from the film and passing through the optical access in the polishing material; and

a device operable to determine, based on the detected interferometric changes, when an end point is reached.

34. (Original) The chemical mechanical polisher of claim 33, wherein the at least one optical access in the polishing pad is transmissive to light comprising at least one wavelength between 200 and 11,000 nanometers.

35. (Previously Presented) The chemical mechanical polisher of claim 33, wherein the at least one optical access includes a portion of a fiber optic cable.

36. (Original) The chemical mechanical polisher of claim 33, further comprising a focusing lens to enhance transmission of light passing between the polishing material and the film on the substrate.

37. (Previously Presented) The apparatus of claim 1, wherein:
the receiver is an interferometer.

38. (Previously Presented) The apparatus of claim 1, further comprising:
a fiber optic cable situated to convey light to and from the wafer.

39. (Previously Presented) The apparatus of claim 1, wherein:
the fiber optic cable is situated to convey light from the light source through the polishing surface to the wafer.

40. (Previously Presented) The apparatus of claim 1, wherein:
the fiber optic cable is situated to convey light reflected from the wafer to the receiver.

41. (Previously Presented) The apparatus of claim 1, wherein:
the fiber optic cable is bifurcated.

42. (New) The apparatus of claim 1, wherein the endpoint detector includes:
a detector configured to detect interferometric change in the light reflected from the wafer; and
an analyzer configured to control the apparatus in response to the detected interferometric change.

43. (New) The apparatus of claim 1, wherein:

the receiver includes a detector operable to detect interferometric change in the light reflected from the wafer; and

the endpoint detector includes an analyzer operable to control the apparatus in response to the detected interferometric change.

44. (New) The apparatus of claim 43, wherein:

the analyzer is operable to analyze interferometric change in the light reflected from the film to determine a change in dimension of the film.

45. (New) The apparatus of claim 44, wherein:

the analyzer is operable to analyze interferometric change in the light reflected from the film using interferometry at one wavelength.

46. (New) The apparatus of claim 44, wherein:

the analyzer is operable to analyze interferometric change in the light reflected from the film using spectrophotometry over a continuous range of wavelengths.

47. (New) The apparatus of claim 44, wherein:

the analyzer is operable to analyze interferometric change in the light reflected from the film to determine a change in thickness or planarity of the film.